

The Chicago-Northwestern Convention—Dec. 2 and 3, 1903

AMERICAN BEE JOURNAL



Published Weekly by GEORGE W. YORK & CO., 144 & 146 E. Erie Street.

43d Year.

CHICAGO, ILL., NOV. 26, 1903.

No. 48.

WEEKLY



AN APIARY OF M. H. MENDLESON, IN VENTURA CO., CALIF.



PUBLISHED WEEKLY BY

GEORGE W. YORK & COMPANY

144 & 146 E. Erie St., Chicago, Ill.

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

EDITOR,

GEORGE W. YORK.

DEPT. EDITORS,

DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

IMPORTANT NOTICES.

The Subscription Price of this Journal is \$1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec03" on your label shows that it is paid to the end of December, 1903.

Subscription Receipts.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows you that the money has been received and credited.

Advertising Rates will be given upon application.

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.



The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it. Price, by mail, 6 cents; two for 10c; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

The Emerson Binder

This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only \$1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

GEORGE W. YORK & CO.,

144 & 146 Erie Street.

CHICAGO ILL.

20,000 Pounds

White Extracted Alfalfa HONEY FOR SALE.

Address.

DR. GEO. D. MITCHELL & Co., Ogden, Utah.
46Atf Please mention the Bee Journal.

WANTED—Extracted Honey.

Mail sample and state lowest price delivered Cincinnati. Will buy FANCY WHITE COMB HONEY, any quantity, but must be put up in no-drip shipping-cases.

O. H. W. WEBER,2146-48 Central Ave., CINCINNATI, OHIO.
24Atf Please mention the Bee Journal.

WANTED—Comb Honey in quantity lots. We are perhaps the only dealers in this article owning as much as 150,000 pounds at one time. Please state quantity, quality and price asked for your offerings. **Thos. C. Stanley & Son,** 24Atf MANZANOLA, COLO., or FAIRFIELD, ILL. Please mention Bee Journal when writing.

HONEY AND BEESWAX

MARKET QUOTATIONS

CHICAGO, Nov. 7.—The supply of comb honey is large, and sales are being forced, so that it is a little difficult to give accurate figures. Sales are not easily made of fancy at anything over 13c per pound, with less desirable grades selling lower. Extracted, white, brings 6@7½c, according to kind, flavor and package; amber, 5½@6½c. Beeswax, 28@30c.

R. A. BURNETT & Co.

PHILADELPHIA, Nov. 9.—Honey arriving very freely the last week and prices little easier. This month is best month in the year for demand of comb honey. We quote fancy white, 16@17c; No. 1, 14@15c; buckwheat, fancy, 15c. Extracted, white, 7@8c; amber, 6@7c. Bright yellow beeswax, 32c. We do not handle on commission.

WM. A. SELSER.

ALBANY, N. Y., Nov. 7.—Honey demand and price keeps up remarkably well yet. Fancy white, 16c; A No. 1, white, 15c; No. 1, 14½@15c; mixed, 13½@14c; buckwheat, 13½@14c. Extracted, dark, 6½c; mixed, 6¼@7c; white, 7@7½c; but not as active as comb. Beeswax, 30c.

H. R. WRIGHT.

CINCINNATI, Nov. 20.—The demand for comb honey is slower now than it was six weeks ago, owing to the enormous quantities offered on all sides. Fancy comb is sold in single case lots at 14c. The supply of extracted honey is big, although the demand is good. We are selling amber extracted in barrels at 5¼@6¼c. White clover, in barrels and cans, 7¼@8¼c, according to quality. Beeswax, 30c.

THE FRED W. MUTH CO.

BUFFALO, N. Y., Oct. 11.—The demand for white comb honey is better than it was. The trade is particular and wants only very white, clean stock. If the wax is yellow from travel-stain it does not sell well, and price has to be cut. Fancy white comb, 14@15c; A No. 1, 13½@14c; No. 1, 13@13½c; No. 2, 12@12½c; No. 3, 11@12c; No. 1 dark comb, 11@12c; No. 2, 10@11c. White extracted, 6½@7c; amber, 6@6½c; dark, 5½@6c. Beeswax, 28@30c.

W. C. TOWNSEND.

BOSTON, Oct. 8.—Comb honey continues to be in good demand. Fancy white honey in cartons we quote at 18c; No. 1, at 16c; glass-front cases fancy white, at 16c; No. 2, at 14c. Extracted honey, Florida, 6½@7½c, according to quality.

BLAKE, SCOTT & LEE.

KANSAS CITY, Oct. 23.—Receipts of comb honey good; demand good; market easier. Receipts of extracted light. We quote: Fancy white comb, 24 sections, per case, \$3.00; No. 1, white and amber, \$2.75; No. 2, \$2.50. Extracted, white, 7c; amber, 5@6c. Beeswax, 25@30c.

C. C. CLEMONS & Co.

CINCINNATI, Nov. 7.—The demand for honey is a little better. The prices rule about the same. Extracted is sold as follows: Amber, in barrels, from 5½@5¾c; in cans about ½ cent more; water-white alfalfa, 6@6½ cents; white clover, 6½@7¼c. The comb honey market is quite lively, and it sells as follows: Fancy water-white, 14@15c. Beeswax in good demand, at 30c delivered here.

C. H. W. WEBER.

NEW YORK, Sept. 28.—Comb honey is arriving quite freely now, and is finding ready sale at 15 cents per pound for fancy white, 13@14c for No. 1 white, and 12c for No. 2 white and amber. Very little buckwheat on the market as yet, and prices are hardly established.

Extracted honey is ruling about the same as last with plenty of offerings of all grades.

Beeswax is somewhat declining and selling at present at from 28@29c per pound.

HILDEBRETH & SEGELKEN.

SAN FRANCISCO, Oct. 21.—White comb, 1-lb. frames, 13@14 cents; amber, 9@11c. Extracted, white, 5½@6½c; light amber, 5@5½c; amber, 4½@5c; dark amber, 4@4½c. Beeswax, good to choice, light, 27½@29c; dark, 25@26c.

Market is more quiet than for several weeks preceding, but is fairly steady as to value. Spot stocks and offerings of both comb and extracted are mainly of amber grades, while most urgent inquiry is principally for water-white, the latter being the only kind meeting with much competitive bidding from buyers. Recent arrivals of honey included a lot of 121 cases from the Hawaiian Islands. The bees of the Islands feed mainly on sugar.

WANTED! FANCY COMB HONEY

In no-drip shipping-cases. Also Amber Extracted in barrels or cans. Quote your best price delivered Cincinnati. **The Fred W. Muth Co.** 32Atf Front and Walnut, CINCINNATI, OHIO.

CONVENTION NOTICES.

Chicago-Northwestern.—The regular annual meeting of the Chicago-Northwestern Beekeepers' Association will be held in the Revere House Club-Room, southeast corner of North Clark and Michigan Sts., on Wednesday and Thursday, Dec. 2 and 3, 1903. The Revere House has made a rate of 75 cents per person per night for lodging, when two occupy a room. Meals, 35 cents, or on the American plan at \$2 per day. Owing to the Revere House furnishing FREE a place for holding our meeting, we feel that all who can do so should patronize them during the Convention. Dr. C. C. Miller, Ernest R. Root, W. Z. Hutchinson, Emerson T. Abbott, N. E. France, Inspector J. Q. Smith, Jas. A. Stone and Huber H. Root have signified their intention to be present. Pin this in your hat. There will be one of the best meetings ever held in Chicago. Everybody come.

HERMAN F. MOORE, Sec.**GEORGE W. YORK, Pres.**

P. S.—It has been suggested that bee-keepers bring with them samples of honey, and such little appliances as they have that are considered handy to work with in the apiary.

New York.—The Fulton and Montgomery Counties Beekeepers' Society will meet at the Central Hotel, Market Street, Amsterdam, N. Y., on Tuesday, Dec. 22, 1903, at 10 a.m. This will be the regular business meeting of the Society for electing officers, payment of annual dues, and any other business which may come before this meeting. Annual dues, \$1.00, which also includes a membership in the State and National Associations. **T. I. DUGDALE, Sec.**
F. F. JANSSEN, Pres.

Minnesota.—The Minnesota Beekeepers' Association will hold its annual meeting at Minneapolis, Minn., Wednesday and Thursday, Dec. 2 and 3, at the First Unitarian Church, on the corner of 8th St. and Mary Place (midway between Hennepin and Nicollet Aves.). Go in on the Mary Place side. Procure certificates from your local railroad agents when you purchase tickets, and those living in Minnesota can return for one-third fare, and we hope to secure the same for those living in Wisconsin, Iowa, and the Dakotas. **DR. L. D. LEONARD, Sec.**
WM. RUSSELL, Pres.

Missouri.—The Missouri State Beekeepers' Association will meet in Mexico, Mo., Dec. 15, 1903. J. W. Rouse will act as host to direct the attendants to the hall, which is free to all who desire to attend. Board may be had at the leading hotels at \$1 to \$2 a day. Come, everybody who is interested in bees and honey. Let us have a big meeting. We now have 51 paid-up members. Let us make it 100. Procure certificates from your local railroad ticket agents when you purchase your tickets. It may be you can return for ½ fare.
W. F. CARY, Sec. **J. W. ROUSE, Pres.**

Canada.—The annual meeting of the Ontario Beekeepers' Association will be held in the Town Hall of Trenton, Ont., Tuesday, Wednesday and Thursday, Dec. 1, 2 and 3, 1903, beginning at 2 p.m. on Tuesday. On the program are the following:

"The Advantages of Out-Apiaries; How, When and Where to Move Them," by B. O. Lott; "Shook Swarms," by Morley Pettit; "The Benefits of Organization and the Extension of the Markets," by F. W. Hodson, of the Agricultural Department; "On the Storing of Comb Honey," and "Experiments in the Preparation of Vinegar from Honey," by Prof. Frank S. Shutt; "Address on Experiments," by John Fixter, of the Experimental Farm. There will also be an address by Prof. James, Deputy Minister of Agriculture of Ontario. A report of the Ontario Honey Exchange will be given and discussed. Messrs. Morley Pettit and C. W. Post will have charge of the Question Drawer. The evening of Dec. 2d will occur the annual banquet.

Persons having any new or practical inventions are invited to bring them to the convention and place them on exhibition to show their practical uses. There will be a place for showing these articles.

All persons going to the convention should purchase a full-fare single ticket from the agent at starting point, and get a standard certificate, and if sufficient attend and hold these certificates, the return fare will be one-third, according to the arrangements made with the different railway companies, or, if under 50, two-thirds single fare.

The leading hotels—the Bleecker House, St. Lawrence Hall, and the Hotel Aberdeen—will give a rate of one dollar per day.

A very cordial invitation is extended to all persons interested in bee-keeping to attend and take part in the discussions.
Streetsville, Ont. **W. COUSE, Sec.**

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THE OLDEST BEE-PAPER IN AMERICA

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Editorial Comments

The National Bee-Keepers' Association.

General Manager France, we learn, is preparing a very elaborate Annual Report, which will be mailed to members early in December. He has done an immense amount of work in the interest of bee-keeping and bee-keepers all over our country. Already there is a membership of over 1600. This ought to be made 2000 by Jan 1. Why not? Surely, there ought to be 400 among the readers of the American Bee Journal alone that would join during the next month! We will be glad to receive and forward the dues (\$1.00) for any who wish to send to us when renewing subscriptions. Mr. France reports that "members are joining fast now." Two joined in Texas at the close of a lawsuit in which the Association won—as it usually does.

The forthcoming Annual Report of the General Manager will tell all about the work done by the Association during 1903. It will be mailed only to members. So, if you want a copy, and also desire to cast your vote in the election held in December (next month), you will need to send your dollar in *at once*, if not now a member. If you prefer, send dues to N. E. France, Platteville, Wis.

There are in the neighborhood of 30,000 bee-keepers who are subscribers to bee-papers in America. And yet only about 1 in 20 of them is a member of the National Bee-Keepers' Association. If it were 1 in 10 the membership would be 3,000. It seems to us that it ought to be an easy matter to get 1 in 10 to become members, especially when the Association is doing such good work in the interest of all bee-keepers. In view of such work, does it look right—is it right—that 1600 should bear all the expense for 700,000, which is the number of bee-keepers reported by the last census?

We wish that every reader of the American Bee Journal were a member of the National Bee-Keepers' Association. We are not asking anything in this for ourselves. Only that the bee-keepers might more generally help themselves, and the whole bee-keeping industry, by becoming members of their National Association.

How to Drive Hive-Staples.

When driving staples to fasten a hive-bottom to a hive, one can do it in a right way or a wrong way. The object is to have the hive so fastened to the body that there shall not be the least chance for the hive to slide back and forth on the bottom. If the staples are driven in straight up and down, unless there be an exceedingly tight fit there will be at least a little chance for the hive to slide back and forth. Four staples should be used, driven into the sides, near the ends, and the two staples on one side should be slanted in opposite directions, with the same amount of slant. Then there will be no chance for the hive to slide on the bottom.

Salt and Lime for Bees.

"Salt and air-slaked lime should be put convenient to bees," says the Australian Bee-Bulletin. The partiality of bees for salt is well known, but isn't the lime a new suggestion? What do the bees do with it, Mr. Tipper?

Don't Neglect Your Drone-Breeders.

Too many bee-keepers pay little or no attention to the improvement of their stock, allowing the bees to swarm pretty much at their own will, the swarming settling the matter of the new queens that are reared. Of those that make some effort at selecting, probably the majority look out for the queens alone, paying no attention whatever to the matter of drones. It should be remembered that it is just as important to have a good father as to have a good mother. Decide now a certain proportion of your colonies which are best, breed queens from the best one, and rear drones from the others.

Late Flights Before Cellaring Bees.

The rule sometimes given as to the time of putting bees in cellar—a rule perfect in theory, but not always easily put in practice—is to put them in immediately after the last flight they will have before winter sets in for good. Speaking of this, Editor Hutchinson says in the Bee-Keepers' Review:

While I would leave them as long as I thought there was a *reasonable* chance for having another flight, I don't attach so very much importance to these extra-late flights. After the bees have settled down for their winter nap, they are consuming very little honey. The matter of two weeks does not use up much honey.

True, the matter of two weeks does not use up much honey, but if bees consume twice as much on the summer stands as in the cellar, that two weeks is equivalent to four weeks' consumption in the cellar. It may also be said that bees in the cellar do not consume an enormous amount in four weeks; but there is another way to look at it. The trying time of confinement comes in early spring; not because it is spring, but because of the length of confinement. The bees have been confined so long that two weeks more will mean disease, four weeks more disaster. It is the last end of the confinement that tells—the last straw that breaks the camel's back. Now, please remember that two weeks more on the summer stands without an after flight practically adds two to four more weeks' confinement *at the last end*, and that two weeks will seem no trifling matter.

The Weeds of Ontario.

This is the title of Bulletin No. 94, issued by the Ontario Agricultural College, at Toronto, Ont. It contains about 100 pages, written by Prof. F. C. Harrison, and revised by Prof. Wm. Lockhead. In the introduction to this revised edition, we find these words:

"On account of the increasing demand for information regarding weed-seeds, it was deemed advisable to incorporate into this revised bulletin some information regarding the identification of the common weed-seed impurities which are found in commercial clover and timothy seed. A few additional weeds are described, and the methods of eradication are in many cases given in greater detail."

It is a very interesting pamphlet, and should be of immense value to the farmers of Ontario.

It says: "A weed has been defined as any plant out of place; and in that sense, a wheat-plant in a field of turnips is a weed." From this view, we suppose, the following is said concerning one of the best honey-plants in the world:

SWEET CLOVER (*Melilotus alba*).—The white sweet clover is a very common plant in vacant grounds and neglected fields about cities and along roadsides. It is a tall, rank-growing plant, and thrives best on heavy clay soils. It may be classed among the weeds, inasmuch as it grows where it is not wanted, but it can not be considered a noxious weed. As a soil-former, sweet clover is a valuable plant. It roots deeply, and is a nitrate producer. With the aid of the rains and

frosts it gradually mellows the soil of unproductive clay, and makes it fit for cultivation.

It is a biennial. The shoots of the first year's growth are tender, and are valued in the South as fodder for stock, but those of the second year are tough, fibrous, and branching, and bear the flowers which are very attractive to honey-bees. In some districts sweet clover is grown extensively by apiculturists. The number of seeds produced every year by each plant is very large. Experience shows that sweet clover is not difficult to control. It grows altogether from the seed. If seeding is prevented by cutting down the plants at blossoming time, very few plants will make their appearance the following season.

Although a fodder-plant in the South, sweet clover is not relished by stock in Ontario. On account of the tough, fibrous structure of the second year's growth, there is a possibility that the plant may in a few years be grown for the manufacture of binder-twine, etc.

Should it be proven that sweet clover can be profitably used for making twine, surely here will be something that has long been looked for by bee-keepers—a plant that has value aside from the nectar which it yields.

If we remember correctly, sweet clover seed is valuable for certain purposes.

Who knows but the much-despised sweet clover will yet win its way to power and fame?

Pick Out Your Breeders Now.

"Breed from the best" is a pretty safe motto," and it may be better now than later to decide which the best are. If you have made no definite record of the performance of each colony, by the time you want to start queen-rearing next year you may have only a hazy remembrance of it. So it is better to defer your decision no longer, and after having made the decision you should put it down in black and white, or else mark in some way the hive that contains your best queen. Also mark several others of the next best. Something may happen to your best queen, so that you will want to use the next best, and in any case you will want to know several of your best colonies which are to be encouraged to rear drones, drone-rearing being discouraged in other colonies.

Weighing Colonies.

If you want to weigh your colonies before leaving them to their winter's repose, you can do it by means of a platform scale, but it is a quicker job to use a spring balance. Suppose you have decided that before going into the cellar each 8-frame hive with its contents, cover, and bottom-board must weigh at least 40 pounds. A rope is slipped over the hive in some way—if you have cleats on the ends an endless rope is passed under each cleat—the hook of the spring balance supports the rope, and a tough stick used as a lever supports the spring balance, the short arm of the lever resting on a light frame-work of sufficient elevation.

It may not be necessary to weigh all the hives. Hefting may answer for most of them. Practice will help to decide by hefting when a hive weighs considerably more than 40 pounds, and such a hive does not need to be weighed.

The use of a little more strength, however, will enable one actually to weigh all and do it expeditiously. Have the spring balance supported by a broad strap about the neck, and you can lift the hive by the spring balance just about as easily as you can heft it. Have an assistant to call off the weight. Lift slowly, and whenever the index of the balance passes the 40-pound mark, the assistant calls out "Stop," thus saving unnecessary lifting. Of course, the same principles will apply if some other weight than 40 be the limit. When thus weighing, it may be convenient to use a long staff or stick to help balance or support one.

Selecting Colonies for Next Year's Breeding.

Not a colony, but colonies; for it is not safe to depend upon a single queen—she may die—and several colonies are wanted for drone-rearing. At first thought it may seem a very simple thing to make the selection: Suppose No. 17 stored the past season the most surplus, 200 pounds; No. 23 stored 180 pounds; Nos. 85, 64, 94 stored, respectively, 176, 173, and 160 pounds; these being the best in the apiary, so why not rear queens next year from No. 17, and drones from the others? Well, it isn't so simple a matter as that. In spite of the superior yield of No. 17, it may be that it would be better to rear queens from either of the other four. It may be that No. 17 superseded its queen late in the season, and that the new queen has met a very inferior drone, so that next year the colony may do only mediocre work. You may as well take some time to the matter. Sit down one

of these long evenings with your memoranda before you, and give the matter the attention which its importance merits.

First, make a list of colonies giving the largest yields, putting them in the order of their superiority. If one of them has changed queens during the season, that throws it out of the count, although if the change was made very early in the season the colony may be entitled to some consideration. It may be that one giving an extra yield had in some way an extra chance, as by having brood or bees given to it. It may be that brood or bees were taken from it, for which allowance should be made. The record of previous years should be noted. A colony with a good record for two seasons is better than one with a record for only one season, always supposing that the same queen has run through the two seasons.

If comb honey is the object, it is worth while to note whether a colony has done good work in finishing up sections that are nice and white in every respect.

All these things should be carefully considered along with gentleness, inclination to swarm, etc., and the choice made accordingly; and it is better to make that choice now than later.

Zinc for Hive-Covers.

This is favored by some. More expensive at the start, but it lasts, and there is no question as to its being rain-proof. If it will last a goodly number of years without paint; it may in the long run be the cheapest thing that can be satisfactorily used.

Miscellaneous Items

Mrs. Morrill Dunn, of Chicago, read a short paper on bees at her residence on Nov. 5, to a group of young women who had formed a literary and social club. Through the kindness of Mr. Whitney (of Brookside Apiary, in Wisconsin), and a Chicago friend, she was enabled to show a complete hive, several combs, and a queen-bee with attendant workers. The properties were very interesting, and helped those who had read Maeterlinck's book to place things; and awoke great interest in those who had not a faint understanding of the wonderful system belonging to the most marvelous little creatures the world has to show.

The Minnesota Convention, which meets Dec. 2 and 3, in the First Unitarian Church, cor. 8th St. and Mary Place, Minneapolis, has a most excellent program. Every bee-keeper of that great State should "get there," if at all possible. Among the papers and subjects to be read and discussed are these:

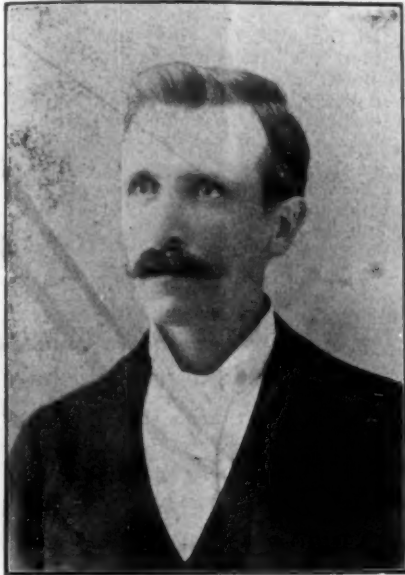
Wintering Bees Outdoors in Manitoba—Dr. C. M. Vanstone.
What is the Best Way of Extracting to Prevent Increase and to Get the Largest Amount of Comb Honey?—N. P. Aspinwall.
Pickling with Honey-Vinegar and Honey—Miss Mary Moeser.
Out-Apiaries and "Shook" Swarms—F. A. Gray.
Co-operation Among Bee-Keepers—Walter R. Ansell and S. Lindersmith.
A Ramble on the Pacific Coast with a Little About Bees and Bee-Keepers' Conventions—Mrs. H. G. Acklin.
Some Reminiscences in Bee-Keeping—J. P. West.
Bee-Keeping from a Woman's Standpoint—Mrs. W. S. Wingate.
Queen-Rearing—G. R. Frye and F. A. Crowell.
Honey Exhibit at the Minnesota State Fair—N. S. Gordon, Supt.
How to Produce a Fancy Grade of Comb Honey—Dr. E. K. Jaques.
Anatomy of the Honey-Bee, and Bees and Fire Blight (Pear Blight)—F. L. Washburn, State Entomologist.
Bee-Keeping as a Side-Line—Geo. A. Forgeson.
Transferring Bees from Logs to Modern Hives, and Getting Rid of Robber-Bees—Wm. Cairncross.

Four-Piece Sections are advocated by Editor Hutchinson, and he thinks the time now ripe for some one to make a specialty of their manufacture, and push them.

California Bee-Keeping is thus commented upon by our good friend, Mr. W. A. Pryal, of San Francisco Co., Calif., in a letter dated Nov. 11:

DEAR MR. YORK:—The reports of the Los Angeles convention, as given in the American Bee Journal, have been interesting me of late. Last week I read that part devoted to the talk by "Uncle Amos," and this week I was an attentive reader of the reminiscences of Mr. Harbi-

son. Of a good deal of the latter's work with bees in this State I have been familiar, as I, some time ago, collected all the information I could about the early history of bees into this State. I am glad he was "drawn out," as he had heretofore kept his "light hidden under a bushel." Little has he given to bee-keepers since he published his book, the "Bee-Keepers' Directory." He has been a great bee-keeper, and it is too bad for the fraternity that he did not do more writing, especially for the bee-papers. His book was a good one. While it is out of print, I have seen a few copies of it around some of the second-hand book-shops. That is where I procured my copy, as well as one for a friend.



W. A. PRYAL.

I notice that Mr. Harbison came to this State in 1854, the year my father came, I believe. Both were engaged in the same business, my father being located at first in San Francisco, and afterward in Alameda county, then what were portions of Contra Costa or Santa Clara counties. Mr. H.'s remarks about getting \$1.00 a pound for honey reminds me of some of the early settlers telling me that they saw a single peach sold for \$1.00. My father told me that he sold ordinary varieties of roses in the 50's, in this city, for \$10 the plant. Strawberries sold for more than \$1 a pound in the early days. All this seems strange to us Californians of the present day, when fruit is about the most common product of the soil we have, and can, at times, be had for almost nothing. And here honey has sold for less than it does in any portion of the world, in all probability.

Mr. Harbison voiced splendid advice when he called for the planting of honey-secreting plants. I have contended for a quarter of a century—it begins to make me feel old when I speak of such a long period of time—for the planting of honey-producing trees and plants. It was in 1877, I believe, I drew attention to the fact that the eucalyptus was a great honey-producing tree. This fact may have been noted by others before I mentioned it in the bee-papers. I am glad that the tree is now fully recognized as a boon to apiarists.

I firmly believe that alfalfa will be one of our great honey-plants scattered all over the State. I find that it is now growing in all manner of out-of-the-way places. Birds and other animals are sowing the seed far and near. In time it will be found growing wild on the highest hill-tops, as well as in the valleys. I find it growing in the most unlooked-for places in Alameda and San Francisco counties. It behooves bee-keepers to scatter the seed by roadsides and other places, which will then become distributing centers, so to speak. A good place to sow the seed is well up in the hills and mountains near a stream. In this way the seed from the plants that will thus come into existence, will work their way downward and edge the stream with a garland of alfalfa for the bees to revel in—first, away up on the hill-side (if it is a sunny exposure), and later in the valley below.

There is no doubt in my mind but the whole of California is a big bee-garden. The central and northern portions of the State have the advantage, owing to the fact that they are better supplied with rain-falls. While as much water-white honey may not be produced northward at present, I believe the time is not far off when color in honey will not cut much of a figure so long as the article is of good flavor. To my notion, some of the amber-colored honey I have tasted surpassed any of the so-called white honeys.

We are having nice rains. They came late this season. The grass on the hills and valleys is shooting up rapidly. If you were here now you would not find things as parched as they were when you were here in August—in the middle of our dry season. Mind you, when you saw some of the lower counties you saw but a very small portion of our great State. Just remember there are some valleys that are green the year around. There is the Pajaro valley, about 100 miles south of here, in Santa Cruz and Monterey counties, that is as verdant the year around as the Emerald Isle, and where the fine apples that tickle the palates of Londoners are shipped from, to a great extent. Then its strawberries and other small fruits are favorites in the San Francisco markets. 'Tis a great producer of sugar-beets, butter, cheese, etc. Then portions of Humboldt county has its rich valleys that never fail of crops. While the rainfall of the south end of the State may be five inches, the precipitation in that County may, as it often does, amount up to 80 or 90 inches. Wonderful things happen in California!

Then along the Sacramento and San Joaquin rivers there are vast tracts of land where wonderful crop-yields are harvested annually. In these valleys bees are not known to die of starvation, so I have been told. But once in a while they have been drowned by overflows.

In mentioning the eucalyptus I may say, in passing, that I found

the inclosed clipping in the editorial columns of this morning's San Francisco Call.

Yours very sincerely,

W. A. PRYAL.

The clipping mentioned by Mr. Pryal reads as follows:

TIMBER AND BEE-FEED.

The Pacific Fruit World turns to the varieties of eucalyptus tree to insure in California the amount of bloom necessary for bee-feed. The honey-industry is a large one. Sometimes the fields do not suffice to make what is considered a full crop. How is this defect to be remedied? The Fruit World says simply that the planting of a proper number of eucalyptus trees is all that is requisite.

There is something novel in the proposition to cover the land with trees of the size of the lofty eucalyptus to serve the minute, buzzing honey-makers. It does not follow from this suggestion, that because the idea is new, it is not practicable. Indeed, the Fruit World cites facts that are at least interesting in support of its scheme.

There are a sufficient number of varieties of eucalyptus known to California to provide blooms during every season in greater or less quantity. When the flower-bearing plants and shrubs fail to contribute their full quota of nectar, the eucalyptus would be invaluable, so estimates the Fruit World. "It is possible," says the editor of the journal, "to make such planting of eucalyptus trees as to secure from them a succession of bloom which will, in addition to their use as fuel, give ranges for the honey-gatherers."

The Eucalyptus calophylla and the Eucalyptus acemenoides are in flower from July to October. The first-named is the bearer of white blossoms. The Eucalyptus cornuta, which is well known by its affluence of yellow flowers, follows closely after the calophylla in time of blossoming. The Eucalyptus corymbosa has the same season practically. The Eucalyptus exima, a low-growing tree, reigns florally from September to December. The Eucalyptus punctata, famed for withstanding drouth, is an October bloomer. The most brilliant of the eucalyptus family is the ficifolia, but its season is short. On the adobe hills the rudis thrives. At all seasons the occidentalis proclaims its name through its crimson adornments. Then there are the Lell mellidora, that is rich in honey; the lehmani, the paniculata.

Seeds and trees, it is said, are available to start all the plantations that may be required. The eucalyptus has retained its popularity variously in this State during many years.

Tall groves make wind-breaks to shield orchards of deciduous and citrus fruits in many localities. Long avenues of shade attest its desirability in another use. Stout cord-wood it makes to enhance the joys of home, as it is consigned to the open grate. Medicinal qualities inhere in it, and many men bless its oil. It has been employed to furnish material for cleansing the interiors of steam-boilers. Now, humming through the ambrosial air of California, the nectar-gathering bee may add its note of cheerful praise for the bouquets of flowers raised high above arid lands by the eucalyptus' aspiring and mast-like trunk as a source of a table dainty.

The above is right in line with Prof. Cook's article on another page. Wherever the famous eucalyptus will grow, we should think that bee-keepers would aid in planting it. Its honey is delicious, of excellent flavor, thick in body, though rather dark in color. But as Mr. Pryal well says, color in honey will be of less importance as time goes on. Color in honey is now, and has been, a fad which we are certain will pass away like many another senseless fad.

A California Trip Correction comes from Wisconsin, in the following:

DEAR BROTHER YORK:—Didn't that coyote "convention," the altitude, heat, "Max Jenney's talk," or something, get you a little "mixed" when you announced in the American Bee Journal of Oct. 1st, that you traveled through the New Mexico desert after leaving Williams, and through the Arizona desert after leaving the Needles, on your way to Los Angeles? Have traveled over the Santa Fe route four times, and never found it thus. Perhaps there has been a big earthquake since I was there. It used to be Arizona from Williams to Needles, and California the rest of the way to the coast. Don't wonder "Max" failed to tell you that that 250 miles of the worst deserty kind of desert, from Needles to San Bernardino, was all California—beautiful, "blooming" California—or that you failed to discover it for yourself. Why, I lived in San Bernardino County more than three years before I discovered it, or even knew that it was all San Bernardino County from Needles to Los Angeles! There are some big things in California besides trees and liars.

Your description of "Max" was particularly good. Did you happen (?) to meet his twin brother, "The Real Estate Agent?" Of course you did; the deserts are full of him. You were not there long enough to see and learn everything. Still I have known people to stay there less than a week and know it all, or think they did, when, in fact, the amount they did not know would have made a large encyclopedia.

There are some curious things growing in those deserts besides yucca, cacti, horned-toads, etc. I am going to send you something I "grew" there, without any irrigating. I call it "A California Welcome." I hope you will excuse me for calling you "Brother," but, the fact is, my husband is a bee-keeper, as was his father before him, and bee-keeping seems to "run" in the family.

An Ex-Californian, with a big X,

MARY B. HALL.

Yes, Mrs. Hall, you are right in your correction.

See page 762 for that "Welcome."

Convention Proceedings

THE LOS ANGELES CONVENTION.

Report of the Proceedings of the 34th Annual Meeting of the National Bee-Keepers' Association, Held at Los Angeles, Calif., Aug. 18, 19 and 20, 1903.

(Continued from page 744.)

FOUL BROOD, BLACK BROOD, PICKLED BROOD.

Question—What is the difference in the symptoms of foul brood and black brood in the appearance and development of the diseases? Are they two distinct diseases, or but one?

Mr. France—A comparison of foul brood and black brood shows that foul brood always has that brown color, a little darker than in healthy brood, the dead larvæ of a light color, and, as it is termed, ropy. At this stage, if you run a match or toothpick into it, this dead larvæ will draw out with an elasticity like glue. And, by the way, it smells like a furniture glue-pot. It has that old, disagreeable foul-brood odor. If it were black brood it would be very much darker, and the odor would be like a rotten, sour apple in an old cider-mill. It is somewhat more of that nature. It attacks the larvæ earlier in the life of the bee, and those affected turn a very dark brown, almost black, and die. Now, I never knew foul brood to have that peculiar characteristic, but when you go into it in the finer details, under the magnifying glass, the germs of the diseases have a very strong resemblance. They are each of them rod-like, and each of them throws out spores, and thus propagates. In that particular feature they seem to be alike. It seems to be a little harder in treatment. I believe I was the first to go beyond Mr. McEvoy in the treatment of foul brood, caging the queen while making the treatment. I did have a few cases where the colony was so dissatisfied that they deserted their home and went into neighboring hives, queens and all. They were fed liberally, and they stayed away. I avoided that trouble by caging the queens. New York bee-keepers have followed in the same line, treating black brood as foul brood, and caging the queen, and have even gone further and caged the queen for two days longer. All that is necessary is to get the diseased honey out of the hive into clean quarters.

Question—What is the cause of pickled or black brood? Is it contagious?

Mr. France—I feel that this subject of pickled brood is one of vital importance, because it has created in my own State a great deal of anxiety, and it has been quite serious. As to the cause of pickled brood, I have fully convinced myself what it is, and what causes it. In a little leaflet that I issued for Wisconsin bee-keepers, I described black brood and pickled brood. I do not know but I might as well read this as to try to give it in any other form. Your season here is earlier, so these dates would not correspond with conditions here:

"The larval bees (in Wisconsin the last of May and through June) show light-brown spots; a little later the cappings have small holes, they are not sunken or dark-colored as in foul brood. The dead bee will be at first swollen, with a black head, dried to a hard bunch, and often turned up Chinaman-shoe like. The skin of the dead bee is quite tough, and, if punctured, the thin, watery fluid of the body will flow as freely as water, often a little yellow or brownish colored from the dissolved pollen from the abdomen of the bee. It has very little or no smell, does not at any time stick to the walls of the comb, is easily pulled out of the cell, is never ropy or sticky, and, if the colony is properly cared for, the bees will take care of themselves. Plenty of liquid unsealed honey and pollen near the brood, and hives so protected as to keep bees and brood comfortable on cold days and nights."

So much for pickled brood. Now, what causes it? Cold, backward spring weather, when the bees can not get out and fly, causing a shortage of food, is the cause of nine-tenths of it in the State of Wisconsin. For instance, in

this State, last spring, you probably had some cold, backward weather. Then came on beautiful weather, and brood-rearing commenced, the honey-flow came on about the time of the honey-flow, and pickled brood would appear. That pickled brood may have started before you saw it. It is lack of nourishment and care of the larval bees. Just as we people first look out for our own stomachs, then those of our neighbors', so these bees, if they can not get out to work, will subsist upon the honey in the hive. There may be lots of solid honey in the hive, but the brood may be starved or chilled, and these conditions may produce a case of foul brood, or, under these circumstances, pickled brood. I do not believe a case of pickled brood ever produced a case of foul brood, any more than diphtheria produces small-pox.

What shall we do to get rid of it? Strengthen the bees so that they will have an abundance of honey. That is all there is to it. In one apiary where there were 80 colonies, and they had foul brood in a colony, I took every other hive, and simply gave those colonies an abundance of feed, and let the others go as they were. In ten days time, the colonies that were given the extra honey had carried out the dead, but the others were dwindling down, and there was more and more pickled brood. Then, in the same yard, I cautioned the owner, just during the time between fruit-bloom and clover, about ten days there that the bees do not get any honey; I said, "Don't you let them know anything about that famine time. You feed them those ten days, so that from the time there is no fruit-bloom there is something for them until the clover comes on." What was the result in that apiary? There is not a case of pickled brood there.

I don't believe foul brood and pickled brood are alike. Nor do I believe that black brood and pickled brood are one and the same. But there is another condition of affairs that seems to corroborate it. I have had several samples, and there is one here in this box. There is a condition that is rather serious, and it has a similar appearance to foul brood at some stage, but, owing to climatic conditions, or something, I have been unable to have an analysis that is to my satisfaction, to know what you would call it. We must take these conditions locally, and I would want to understand your conditions here before I could do it satisfactorily, but I believe you Western people will go after it and correct it.

How does it differ? Not so much brown, but more nearly black. It bears down loosely, and you can touch the comb up with a little pair of tweezers without any trouble.

Do the bees carry it out? In some localities they do. They say in Washington and Oregon the bees seem to carry out a good deal of it.

A Member—We have a modification of foul brood here; the color is darker, but the substance is not very elastic, but I have been thoroughly convinced that it is simply a modification. It is quite common here the last few years.

Prof. Cook—I have been very much interested in what has been said here in regard to pickled brood. We had a great deal of brood dying here in this way. I did not call it pickled brood; we called it a new bee-disease. We did not have much of it. You have diagnosed it exactly, Mr. France. I believe it was a case of starvation, or, any way, malnutrition.

Question—I would like to ask, where Mr. France says "contagious," if he means that it can be carried like cholera or yellow fever, or does he mean infectious, like carrying some of the spores from an infected hive? I would hive them, and they would set along in a row near my barn; as I had no particular use of that I would allow them to remain them. I had a colony nearly perish with foul brood before I discovered its presence, but had hives within 6 inches of it where foul brood never appeared; but as I arrested the progress of the disease by removing and burning up the others, I concluded "contagious" did not apply, but that it is infectious. I want to know whether he does mean infectious.

Mr. France—His question was, "Do I think the germs of foul brood float in the air, and in that way would infect another colony?" No, I do not. In that case, why would not every cell in that comb be infected? I very seldom find a comb where all the cells in the comb are infected, even though some will have it in the last stages of the disease. I have taken the stand where a good many have called me down, but I am just as willing to be called down when I can be proven to be in the wrong.

How fast, and what will spread the disease? I contend that the comb having the disease in certain cells, when honey, larvæ, pollen, or anything the bees deposit is put into those cells, that material becomes infected. The next cell may never have had foul brood in. It is contagious

only when it comes in contact with the disease. And brood-combs are safe to use from a diseased colony where they have gone up and stored their honey, and there has been no brood reared in those combs. I believe there is no danger. I will tell you what I did a few days before I left home to come here. An apiary of 68 colonies, all of them with the disease; the hives were three or four stories high, extracting combs above. It did seem a shame to destroy all those combs. I said, "Don't do it. We will fumigate all of these." But the ones below, where there was disease, I said, "This is worth much more for beeswax, and we will use some new sheets of foundation."

By the way, with a German wax-press, you can take your combs and render out almost enough wax to pay for the new foundation.

Question—Would you hesitate to use a hive that had had the disease in it?

Mr. France—No, not unless that hive had had foul-broody honey daubed upon its bottom. In that case, I would want to scrape or boil it thoroughly. Seven years ago I disinfected hives, scraped and boiled, and even took kerosene and burned them out. But I would not want to live in a house with the walls all charred and black, and I do not believe the bees do. Now, I put the bees back in the same hive, simply scraping it. Those cells were clean, and I do not believe there is any danger.

Question—What amount of boiling would you give them?

Mr. France—I simply immersed the hive in the boiling water sufficient to melt the wax.

Question—I would like to ask how the foul brood is usually conveyed? also, if it would eradicate the disease to cut out certain parts of it and have the combs recleaned, simply cutting out those portions of the comb that contained foul brood?

Mr. France—I have agreed in some cases, where there seemed to be but little of it, only one or two cells of foul brood in the comb, or perhaps eight or ten in the entire hive, to cut out and remove the diseased parts, keeping track of the hive, and in a majority of cases that has been all right; where it was not, I fear there was something covering up some that I did not see. It is a risk, however, for we can not see what is covered up.

Question—I would like to ask how it is conveyed from one apiary to another, usually.

Mr. France—It is conveyed largely by robber-bees, and the bee-keeper's manipulating.

Question—Is it not a fact that it has been conveyed from one apiary to another several miles outstanding, at a time of the year when robber-bees do not work?

Mr. France—I would have to get after back-track history there before I would want to admit all that.

Mr. Corey—We used to boil the hives, but it was very bad on the hives, because when they got dry they would get loose. We abandoned that plan a long time ago. We had a very eminent chemist with us at one time, and he recommended the use of bisulphide of carbon, and told me to buy a can of gasoline and put 25 percent of bisulphide of carbon with it, and take a brush and go over the inside of the hive and give a thorough treatment to the cover, and we would save our hives, our nails would all be intact, and our beautiful white painted hives, and he said it would be impossible for any spores, no matter what kind, to exist in that bisulphide.

Question—Would comb honey on top of the hive, produced from diseased bees, be safe to use or feed to other bees?

Mr. France—I think it would.

Question—Two years ago we had a case of foul brood. The lady asked me if she could feed the bees with that comb honey that she had; I told her I thought she could; we fed that back again, and the next year, or rather last spring, they moved away and sold their hives to some one else, and they were just literally grown up with foul brood. I think, unless they got it from some one else, it came from that comb honey.

Mr. France—I would get after back-track history again. In Wisconsin a man bought an apiary because he got it cheap; in due time it was united with his other apiary, and that yard dwindled down until it was half gone with foul brood. He treated it with the McEvoy plan. The next spring, as soon as brood-rearing got nicely started, he treated it again; altogether he treated that apiary seven times, and the disease would re-appear. He said, "I guess I had better quit the business." He tried to get legislation to help him, but he could not. He stood alone. He went before the legislature, and was ridiculed and laughed at.

Then, through the State Bee-Keepers' Association we got legislation. Otherwise we never would have gotten it. So much for the State Association. How much quicker we would have gotten it had we had a National one! I went to this apiary, and there were about four car-loads of empty hives. I went inside of the apiary in a neighboring yard, and there was foul brood and no attempt to get rid of it. What was the use of treating when his neighbor would not treat?

Question—What is the difference in the symptoms of foul brood and black brood, in the appearance and development of the diseases? and are they two distinct diseases, or but one?

Mr. France—I intended to bring some samples of enlarged cells of black brood, foul brood, and pickled brood. But black brood is always black, and head under, sharp-pointed, a little turned up, and quite hard. Pickled brood, the lower end light brown, thick skin, and the bottom end apparently a water-bag, as you would take hold and pull it out, which is easily done, as it is never ropy or sticky, and you puncture that skin and the fluid will run as freely as water. If it is black brood, that little bee would cover up about half to two-thirds of the bottom of the cell; it turns brown, or nearly black, with white streaks running near the center. It doesn't come out and get this sharp end to it like pickled brood at all.

Question—Do you think it is safe to feed bees comb honey from hives that have been treated for pickled brood, or black brood?

Mr. France—I would not use it for that purpose, unless I had heated it.

B. S. Taylor—I own three apiaries in part. One apiary had foul brood; in every case, where they fed this honey, it produced foul brood, for all of these had foul brood the next year. In regard to cutting out combs, one man, five years ago, had 240 colonies. Wherever he found a symptom of foul brood, he cut it out or burned it. Last year he got down to 56, and I found 28 that had foul brood. Now he has 11. Another man has been cutting down 100 colonies, and has been cutting out and burning them. I said, "In my opinion you will find 20 cases next spring."

Question—Is black brood as contagious as foul brood?

Mr. France—Yes; even worse.

Question—Will it cure itself?

Mr. France—Not until the bees are dead.

C. J. Davidson—To what heat would you subject honey in order to make it safe in feeding bees—honey that you are suspicious of—simply bring it to a boil to eradicate the germs?

Mr. France—Many have misunderstood that term "boil." I have had considerable correspondence in regard to Dr. Howard's treatment of that. He used dry heat. In boiling, I invariably stir so as to bring the center of the can to the boiling surface, so that it all gets heated. You may take an ordinary-top milk-can, which is common upon the farm, set it on the stove, and if you do not stir the contents you will find the center of the can has hardly been heated through, while it is apparently at the boiling point. One man said, "Any man can see that is boiling." I said, "You haven't killed the foul brood in that." I put my hand down deep in that and it didn't burn. I believe in thorough stirring. When it has all been boiled, and all brought to the surface, it will be safe to use to feed the bees. The germs will then all be killed.

Mr. Corey—You don't believe it is necessary to cook it two or three hours, do you?

Mr. France—No.

(Continued next week.)

Honey as a Health-Food is the name of a 16-page leaflet (3½x6 inches) which is designed to help increase the demand and sale of honey. The first part is devoted to a consideration of "Honey as Food," written by Dr. C. C. Miller. The last part contains "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by every one who has honey for sale. It is almost certain to make good customers for honey. We know, for we are using it ourselves.

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Contributed Articles

Roadside Tree-Planting and Reforesting.

BY PROF. A. J. COOK.

MUCH has been said in the past in the "Old Reliable" on this important subject. However, too much cannot be said, for there are very few topics discussed in our journals that are more important, or that more deeply concern our entire people than this.

It is a well-known fact that our climate, both as to temperature and rainfall, has greatly changed since our country was first settled. The extremes of climate are much more marked, and we all know that with extremes, either of heat or cold, often comes disaster. Extremes of rainfall are also of startling frequency during late years. The drouth dries up the crops, and brings distress often to a wide range of our farming population. The terrible floods that come with the frequent downpours are even more distressing. Millions of dollars worth of property are swept away, and human sacrifice often brings wide-spread sorrow. There must be some common cause for these unwelcome changes. Whatever cause it is, it must be something that is very profound and far-reaching. We can hardly conceive that the cultivation in the soil is enough in itself to have effected this change.

The only other thing that we can suggest is the wide-spread and unfortunate depletion of our forests. If this can effect or bring about this change, then, surely, we have an easy explanation, for the denudation of our forest areas is something tremendous. The destruction of our forests during the last generation has been great, beyond compare. It is easy to believe that the presence of great forests in holding the rainfall, in moderating wind, in staying heat radiation from the earth, may have just the effect to moderate temperature and equalize moisture. I believe it is the consensus of the best educated men along the lines of meteorology, that the cutting away of our forests has brought these disturbances, and brought upon us these terrible extremes.

If the suggestion made above is correct, then certainly it is none too soon to begin the work of restitution, by commencing the wide-spread and wholesale tree-planting. I believe it is safe to assert that nothing that we can do will give so much hope in way of climatic improvement as general reforestation of much of our land area. Surely, it is none too soon for every one who owns any land, whether it be farm, or city lot, to begin the work of setting out trees. If we could all become sufficiently impressed with the importance of such action, we would all become at once tree-planters, and I believe we would perform a patriotic work, for which we would rightly receive the blessing of all the coming generations.

There is another argument, hardly less persuasive, which favors immediate action in this direction. How beautiful is a country or city where trees are much in evidence along street or roadside. Cambridge, in Massachusetts, New Haven, in Connecticut, and Riverside, in California, are illustrations of the value of tree-planting as a matter of æsthetics. The country, too, where all roadsides are adorned with trees is always sought by the would-be farmer. The advanced value which city or village lot or country farm attains upon the presence of trees, is sure evidence that beauty has a hold upon our people. It should be so. Anything that develops taste or love of the beautiful advances civilization and fosters good fellowship. Here again, then, we should all take a lesson and become enthusiastic supporters of any action which tends to increase the trees along our streets and roadsides.

The bee-keeper is also very greatly interested in the planting of trees. We all remember the great reputation which the famous Mohawk Valley of New York, and the great linden regions of Wisconsin, secured in bygone years because of the immense honey crop. This great yield of honey came almost as surely as the season, and a maximum crop was usually expected. With the change of climate, and the disappearance of the trees, the honey product is not only greatly diminished, but is far more precarious. It is hardly to be hoped that we can ever bring back anything like the old-time basswood forest, but if every one would inform

himself as to the necessity of reforesting our country as far as possible, and urge action to secure it, in season and out of season, we certainly should do very much, not only to improve the climate of our country, the beauty of our landscape, but also to effect a great increase in the honey-product of the land.

Without doubt there is going to be a great impetus in this direction of more extensive setting of trees. It behooves the bee-keeper to have his ear to the ground, and use every influence in his power to direct this work, so that he may gain to the utmost by this increase of roadside



BLUE-GUM (EUCALYPTUS) FLOWERS.

trees. There is no more beautiful trees for roadside planting than the American linden. There are no trees more valuable for other purpose than beauty. There is certainly no trees, or even plant, that secretes more or better nectar. Every bee-keeper should see to it that in the great work of tree-planting the grand old basswood is not neglected.

Hardly second to the linden in beauty or value, as affording economic products, or as a honey-producer, is the tulip, often called whitewood, and in the South incorrectly called the poplar. The bee-keeper will certainly use his influence that the tulip may have a fair consideration, as our country is being beautified by these gems of the landscape. The maples—both the sugar maple and the soft maple—take rank among the very first of our trees for beauty. The wood of these trees is also of great value in the market. While the maple blossoms a little too early to give it chief value as a honey-producer, yet it does furnish no little honey, and is no small importance in stimulating the bees to greater industry in the early spring months. For variety's sake, the bee-keeper may well urge that the maples share with the incomparable linden, the magnificent tulip, a place in city street and along country roadside.

California is as much interested in this matter of tree-planting as is any State in the Union. Indeed, I think it is more so. Water is the great desideratum in California. Too scant and too infrequent rains are a chief source of anxiety among the residents of this delightful region. Here, trees should not only be planted along the roadside and city streets, but if our people are wise, great blocks of trees will be set out on areas not otherwise occupied; and certainly more and more attention will be given to the reforesting, of our mountains, where, through inexcusable carelessness,

great areas of timber have been burned to the ground. I fully believe that could our people be made to realize the importance of this matter of a greatly increased forest area in our State, we should have a general movement all along the line towards wise and extensive planting of trees.

Among the trees most desirable in California, stands pre-eminent the various species of eucalyptus. There are said to be 150 species of this genus of tree. They come from Australia, a region very similar to California. In such arid regions trees must become deep-rooted to live at all, and because of this deep rooting they will of necessity grow very rapidly, and will be fortified against the drouth that is sure to come with each year. For safety's sake, then, no tree should take precedence in such regions as California, Arizona and Nevada, of these fine, rapid-growing eucalypts. I am happy to say that our people are realizing the truth of this statement, as is shown by the rapid increase in the planting of these trees. The trees are not only attractive in form, foliage and blossom, but they are, I think, without exception, valuable for honey.

There is an interesting fact about the blossoming of these trees. Of course, in their native Australia, they blossom in the spring, which is our autumn. As they are transplanted to our State, on the opposite side of the equator, they are much perplexed. It is a struggle which shall most influence—their old habit and heredity, or their new environment. Thus, their time of bloom is very varied, and the time of bloom will change with the years. At present we can find eucalyptus in bloom during several months of the year. It is wise, then, in selecting eucalypts for tree-planting to plant a variety, that we may extend the time of bloom as much as may be. It is also wise, at the same time, to secure such trees as are valuable for timber, posts, piles, etc.; such trees as grow rapidly and will stand greatest extremes of heat and cold, and also trees that are desirable for beauty. I will proceed to give a few trees that are to be heartily recommended:

Eucalyptus citriodora is a tree that is specially commended as a honey-tree. It is a profuse bloomer, and very attractive to the bees. The leaves are very fragrant. It is very graceful, and thus is to be recommended for its beauty. It has the one objection of being rather impatient of frost. It kills down here at Claremont when young, but when well started seems hardy. The wood is like hickory, and thus will always have a value in the market.

E. rostrata is the well-known red-gum. It is graceful, grows rapidly, and makes a fine roadside tree. It is said to be the best money-getter in Australia of any of the eucalypts. It attains a height of a hundred feet. It grows well under quite a variety of climate, enduring a climate of from 15 degrees F. to 115 degrees F. The timber is valuable for many purposes, being hard and strong. It is used in our States extensively for fuel and posts. It ranks high as a honey-producer both in America and Australia. I doubt if any tree is more desirable for roadside planting in California and Arizona.

E. rudis is a favorite in the Fresno region. It also will stand a wide range of climate. The timber of this tree is also first-class, and it stands among the best for honey.

E. corycalyx is the well-known sugar-gum. This reaches one hundred feet, and in Australia is said to attain a diameter of six feet. The bark is smooth and a buffy white, though the twigs are quite red. It stands our California temperature well, and, like the other trees mentioned above, resists the drouth to a surprising degree. It is more valuable for many purposes than is the common blue-gum, as the timber is very durable, and lasts a long time when set for posts. It blooms profusely, and is excellent as a honey-tree.

E. tereticornis is very similar to the *rostrata*, and is often known as redwood. I hardly know which is the more desirable for planting, and can cheerfully recommend both.

E. sideroxylon is very attractive to me. It has the grace of the American elm, while the narrow leaves make it especially beautiful. It is called, in Australia, the "red iron-bark." It stands our Claremont climate well. Its colored blossoms make it peculiarly attractive, and for this alone I should plant this tree, as also the still more beautiful and showy *E. ficifolia*, which has very showy red blossoms. The timber, while not as valuable, perhaps, as that of some others, is also much used for posts and in the arts—anywhere where strength and durability is required.

The other eucalypts that are specially valuable for honey are: *E. calophylla*, *E. hemiphloia*, *E. leucoxylon*, *E. longifolia*, *E. melliodora*, *E. pilularis*, and *E. polyanthemus*. All of these are worthy a trial in many parts of the warmer regions of California. I have often been asked by the beekeepers of California to give a list of the eucalypts desirable

for roadside planting, and for more extensive planting, with honey especially in view. I believe the foregoing may be of service, and I am sure can be relied upon.

Los Angeles Co., Calif.

Hasty's Afterthoughts

The "Old Reliable" seen through New and Unreliable Glasses.
By E. E. HASTY, Sta. B Rural, Toledo, Ohio.

GETTING BEES OUT OF SUPERS AND OFF COMBS.

McIntyre seems to be a mine of wisdom on several points of interest besides the cold knife. A dash of Cyprian blood makes 'em a trifle hot, but it does 'em good, and he grins and bears it. Disinclined to so much waiting as bee-escapes require; so he goes at 'em in the older orthodox ways—smoker and wet manila brush. (At my yard I would sooner completely take the combs with brush and smoker than put the escape in place—say nothing about the waiting.) If his brush was not wet, I suppose his "Cyps" would be hanging on one to each fiber. Giving each colony its own combs back, too much fuss. Same here. Late in the season I think an important gain in giving alien combs. They consider them plunder, and go at them sharper to clean them up. But that makes too much rumpus in the yard—and I get some fussing in another way—hold the supers empty till eventide, and then put the combs in. As to brush, I use a hen's wing, dry. Bees hang on sometimes, but not often. I'm disinclined to use two brushes on the same comb; and the wholesale "sweep-em" seems hardly adapted to get the bees out that cling a-top the bottom-bar. Possibly those who use it make it do so, after a fashion. Page 647.

BREEDING NON-SWARMERS.

And McIntyre thinks he could breed bees that would be non-swarmers—but they would be poor bees on the main question. Rather unique idea. But he's in line with the rest of us when he finds his bees fair non-swarmers one season, and terrors to swarm another season. Page 647.

HONEY SENSITIVE TO ODORS.

J. S. Harbison says honey is as sensitive to bad odors as butter, lots and lots of it half ruined by smoke. If he's right, the shallow super and get-the-bees-all-out-with-smoke folks have a severe backset. Rather seems to me that he is giving us "the truth, and more than the truth." You see an inspector *might* lay to smoke a purely floral bitter he succeeded in tasting in the honey. Page 647.

FLORAL BACTERIA—ORIGIN OF MICROBES.

J. E. Johnson says some of the higher forms of bacteria have actual flowers. Surprising! News to some of us—but not necessarily false on that account. But his question, whether any microbes originate spontaneously—well, at present I fear that must stand as a "fool-question." Present scientific feeling is, I believe, that a new bacterium *might* come to us from the planetary spaces, but not originate chemically. Interesting to see that Prof. Burrill, original discoverer of the pear-blight germ, thinks it possible that it might travel in fog. Page 648.

SULPHUR AND PARALYSIS.

Make every bee wade through sulphur to get into the hive—there's an easy and simple remedial method for you—providing sulphur will actually cure paralysis. Credit to Mrs. Artie Bowen. Page 649.

CROSS BEES GETTING HELP.

Sister Wilson, you say, "Fancy a cross bee letting up to go and get some other bee to do the stinging." Quite sure I have seen just that—and you will, if you watch out carefully enough. And when she succeeds in getting several to come, sometimes all together they will make a wild dash for reinforcements. Has happened (apparently) in case of a horse or cow tied several rods away, that this repeated rush for reinforcements has worked until half the colony went out and actually killed the poor beast. If you experiment, choose a hot day when bees are idle, somewhat cross, but not very. Put on your veil and take a hoe, and begin hoe-

ing and thumping about say twenty feet from one side of the apiary—a little closer if you don't get a "bite" presently. Page 649.

QUEEN SCHEME FOR QUEEN-BREEDERS.

Great scheme for the queen-breeders. Have a caged virgin queen getting acquainted three days before the old queen is sold, then a second one getting acquainted while the first is getting to laying. Wonder if the latter might not feel so jealous and disturbed in mind as to develop more slowly, wasting in one direction as much time as was saved in the other. Page 652.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

"A California Welcome."

This week the sisters will read with pleasure the bright, breezy poem, entitled, "A California Welcome," which comes as one of the echoes from the Los Angeles convention. The writer evidently knows what she is talking about, having formerly lived in California for some time, where she may have figured as one of the "Welcomers" herself.

A CALIFORNIA WELCOME.

O we love the gentle tourist,
With his pocket full of gold,
When he comes across the mountains
To escape the mighty cold,
And the blizzards, and the cyclones,
And the many Eastern ills;
And we meet him at the station—
Yes, we meet him without fail—
And we meet him, and we greet him
With—"A Ranch For Sale!"

And we shoulder his umbrella,
And his traveling-bag and "grip;"
And we give him hearty welcome—
Hope he's had a pleasant trip;
Doubtless found it rather tiresome;
Say he's looking somewhat ill;
But our glorious California
Soon will cure him, without fail.
Then we call his kind attention
To—"A Ranch For Sale!"

We escort him to the street-car;
As he walks across the street,
He seems to be disgusted
With the dust upon his feet;
And the cushions of the street-car
Almost seem to make him ill;
But he soon forgets his grievance,

For before him, on a rail,
Is this California legend—
"Orange Grove For Sale!"

Then we take him to our bosoms;
Make him very welcome, too;
Call his wondering attention
To the glorious mountain view!
Of the oranges and lemons—
Tell him just to take his fill.
But he seems to look askance
At the "spider" and the "scale,"
Till we hasten to inform him
That—"This Grove's For Sale!"

Then we ask him just to notice
The greenness of the trees.
(They are doubtless blue, back East!)
But we never mention "freeze;"
And of earthquakes, heat, and "northers,"
Our tongues are very still.
But the sun is beating down,
And the sea-breeze makes him quail,
Till he scarcely seems to notice
That—"This Grove's For Sale!"

And we take him to the mountains,
And we take him to the sea;
And we bid him use the water
Just as if the "stuff" were free.

But he doesn't like its fragrance,
Nor approve its lack of chill;
And he seems to feel quite "retched,"
And his countenance is pale;
And we scarcely dare to tell him
That—"This Ranch's For Sale!"

But he seems to be distracted,
(He's been bitten by a flea!)
But we hasten his attention
To the azure sky and sea.
But a whopping old tarantula
Has given him quite a chill;
And a rattler, close at hand,
Is making music with its tail;
Till we quite forget to tell him
That—"This Grove's For Sale!"

And we follow him about,
And "boom" the country, day and night;
And we think it rather shabby
If that "sucker" doesn't "bite;"
If that "tenderfoot" doesn't swallow
Our small, sugar-coated pill.
Then we chase him to the station;
As he rides off, on the rail,
We yell to beat the engine—
"I've a Ranch For Sale!"

Waushara Co., Wis.

MARY B. HALL.

About Queens—Breed from the Best.

We have been blessed with the largest crop of comb honey this year that we have ever had, and this with a very much smaller number of colonies than we usually have, as we began the season with only 124 colonies. Much of this success was due to the phenomenal season, but I believe also that much was due to the superior quality of our queens.

For a number of years we have selected our *best queen* from which to rear queens. Not the best tested queen, as that term is generally understood, for that means only how many golden bands her bees have; but our best queen, as shown by the record of her bees as honey-gatherers. That one fact, pure and simple, decides her worth without regard to her color, although we are *very glad* when our best queen gives us beautiful, golden-banded bees.

I think I must modify the statement that honey-gathering alone decides her worth, for there is one other element that enters largely into the matter when making the decision, and that is swarming. A good, many points will be given in favor of the queen that has made no attempt to

swarm, but be it said to the credit of the good honey-gatherers, that almost without exception they are the ones that have made very little or no attempt to swarm. Perhaps it might be put the other way—the colonies that make little or no attempt to swarm are the ones that store the most.

If, during all the years of our bee-keeping, we had made the effort to improve our bees as honey-gatherers, that we have made for the past few years, I don't know where we might not be now, if the bees had continued to improve at the same ratio. It pays, and pays well, to look sharp as to the record of each queen.

When any colony fails to do good work, the head of their queen is in danger.

Our best queen, this year, gave us 300 finished sections, and quite a number of others came very close to that number. If nothing happens to that queen you may be pretty sure she will be used to rear queens from next year.

Don't Have the Addresses.

To several who have requested addresses of correspondents, I may say that I have made no reply, because I do not have addresses.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keeper's handbook of 138 pages, which is just what our German friends will want. It is fully illustrated, and neatly bound in cloth. Price, postpaid, \$1.00; or with the American Bee Journal one year—both for \$1.75. Address all orders to this office.

Dr. Miller's Answers

Send Questions either to the office of the American Bee Journal, or to Dr. C. C. Miller, Marengo, Ill.

Starting an Apiary—Buckwheat for Bees—Shade, Etc.

1. I have just rented a 4-acre home in the suburbs of a city, and intend starting an apiary with the red clover Italian stock only. Now, as bees are too high-priced here, it is my plan to obtain frames of nuclei. Is this a good plan for a hasty increase, putting one frame and queen in a hive? How soon in March would you order stock? and would about 5 frames be enough to start with?

2. I will sow about 2 acres in buckwheat. How much seed shall I sow to the acre broadcast, and at what time, at the very earliest, in the spring?

3. On the above plan, would each colony produce any queens? If so, what time next summer would you go through them to find queens? and how many queens would I expect to find to a hive? I expect to clip all queens' wings, as ground-pests are not bad here, and I will aim to have all hives down low.

4. I have no shade on my ground, excepting close to the public highway, and it being rented property I can not put out grape-vines, but will try a quick-growth vine of some kind at each hive, on an arbor. What seed would you sow that is of quick-growth and makes a good shade?

5. About how many bees would you allow to a one-story 8 or 10 frame hive, calculating measurement by the pint or quart?

6. Is it necessary to put supers on before brood-chamber is filled up?

7. About how far will the Italians go to work on a good clover-field in honey-flow time?

8. If a colony brings on one or more queens, would you retain them and destroy the old one? and what is the best way, and feed, to care for and keep extra queens in reserve for emergency? I will want to renew about every 2 years?

I love to work among the bees better than running my pet engine. I use Prof. Cook's Manual, and I am a subscriber to the American Bee Journal, and all information about bees is well digested; and if I live long enough I expect to be a member of the National Bee-Keepers' Association.

MISSOURI.

ANSWERS.—1. If I understand you rightly, your plan is to get 5 frames of brood and bees and put these in 5 hives, one frame in each hive. A 1-frame nucleus in June or July would be a pretty weak affair to set up housekeeping, and in March would be likely to give up the ghost. Your safer plan will be to let your five frames stay in one hive as one colony till the colony becomes very strong before dividing; perhaps making your first nucleus in May. But, first of all, you should study thoroughly your bee-book, so as to have a good knowledge of the general principles of bee-keeping, and you will thereby be saved from many a serious mistake.

2. Sow about three pecks to the acre. Buckwheat is not a thing for spring planting, the time of sowing for best results being from the middle of June to the first of July. Still, if there is nothing else the bees can work on, I suppose it might be sown toward the last of April.

3. If you follow the plan outlined, you are not likely to find any extra queens in the hives any time through the season. Such queens are reared when a colony becomes strong enough to cast a swarm, and about eight days after the first swarm the young queen will begin to emerge.

4. Wild cucumber, morning-glory, nasturtium, and hops would answer. The women of your neighborhood can probably tell you of some others.

5. If they mean the amount of bees in a fair colony, 5 or 6 quarts.

6. No, nor is it advisable.

7. If they can find nothing nearer, they might go five or six miles, but would hardly work profitably more than a third of that distance.

8. I don't understand your question, but I don't believe a case will often occur in which it is advisable to kill the old queen. Reserve queens are kept in nuclei, one in each nucleus.

Basswood for Making Hives.

Does basswood make good hives, or would it get too damp in the winter?

MISSOURI.

ANSWER.—My, no! Basswood shrinks and swells, and warps and twists to such an extent that it's not fit for a hive, or anything about a hive.

Uniting Colonies and Saving Queens.

1. If I unite and double up my colonies in the spring, reducing my 35 colonies to 17 or 18, or one-half, when would I better do it? And how will I proceed? Or, can you tell me of some better plan to keep my number down around 25?

2. Can I save queens from the united colonies, and how? Would it be better to let them rear a young queen when they swarm again? You will see by my questions that I don't know it all yet.

NEBRASKA.

ANSWERS.—1. Unite in the spring any time after bees get to flying. It will be as well not to unite directly two

colonies of equal strength. The weakest colonies may be united with those considerably stronger, and you will probably find no fighting if you merely set in the frames of brood, bees and all. Then to unite those nearly equal in strength, first unite half the colony, and four or five days later add the rest. It will be well to have the colonies sitting close together that are to be united. Then when you have finished uniting take away the empty hive, and the field-bees will all remain with the united colony.

2. The only way you can keep the queens will be in nuclei, and perhaps it will be just as well to depend on new queens at swarming.

White Pine for Hives.

Is white pine good material of which to make hives? Will the bees accept it as a home equal to poplar?

INDIANA.

ANSWER.—White pine is probably the sole material used by manufacturers of bee-supplies, unless it be in California, for making hives, and bees accept it without protest.

Sowing White Clover Seed—Bee-Eggs Hatching.

1. When should white clover seed be sown?
2. What is the longest time an egg was ever known to remain in the hive without being hatched?

ANSWERS.—1. It may be sown at different times, perhaps no better time than when vegetation first starts in the spring.

2. I don't know. If I remember rightly, Dzierzon tells of eggs being held about two weeks and than hatching.

Feeding Bees for Winter.

—I have 2 colonies of bees that came here last spring. From the largest we got about 40 pounds of honey; the other hive we did not open. We put them down into the cellar and covered them with a blanket. I think we destroyed one colony, as they did not gather any honey all through September, and there was plenty of clover around. There are only a few bees in the hive. Will I have to feed them? If so, what is the best to give them?

ILLINOIS.

ANSWER.—Bees do not generally gather from clover in September, even though blossoms are seen. The small number of bees in a colony left to itself through the summer, makes it doubtful whether they have a queen. If queenless, it is only a waste to feed them. The best thing for feed is combs of sealed honey, and the next best for this time of year, candy made according to the instructions given in your bee-book.

Wintering Bees in a House—Late Drones.

1. I am thinking how to winter my bees, and have a mind to put them in a small, dark, warm house, shut each hive with screen, and not let them out until in the spring. Will this do?

2. Do bees need more air in winter than in summer.

3. Is oilcloth good to put on top of the frames, or is it too cold?

4. Would paper folded and laid on top of the frames be warmer, and absorb the dampness better than oilcloth?

5. Two of my hives have some drones yet. Why is it?

NEBRASKA.

ANSWERS.—1. Not very well, I'm afraid. By no means should they be fastened in the hive with wire-screen. It will only make them worry the more to get out. Unless you can keep the temperature pretty evenly at about 45 degrees, any kind of a house above ground will not be likely to work very well.


2. No, not so much; but they do need some, and it should be pure as possible.

3. It will do if covered over warmly with something else.

4. Paper is warmer than oilcloth alone. But if you use paper, you must have burlap or some other cloth under it to keep the bees from tearing it to pieces.

5. I'm afraid they're queenless; yet it sometimes happens that drones are suffered late where there is a good queen.

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FROM MANY FIELDS

Doubling Up Colonies—Entrance-Closer.

On page 712, Mr. Bingham says he doubled up his colonies, putting 150 into 75. Why not have him and other veterans tell the best way to do it?

By the way, why don't some experts get up an entrance-closer that will save lifting a heavy hive to turn over the bottom-boards? I use them, and like them very much, but I would like to buy them when I buy my hives.

F. P. BRIGGS.

Middlesex Co., Mass., Nov. 16.

[Mr. Bingham is hereby requested to tell us how he doubles up colonies.

A good entrance-closer was illustrated and described about three months ago in these columns.—EDITOR.]

A Big Catnip Experiment.

I promised, some time ago, to furnish an article for publication relating my experience the past season with catnip, so here goes:

"Ten acres of wild catnip; ten thousand pounds of choice comb honey; \$3,000 worth of seed in one short season; and how I did it."

It was about sundown, a little later or a little sooner, may be, I don't know (borrowing the language of Josiah Allen's wife), a real thought came to me that a reality of the above paragraph, although somewhat extravagant, would not be impossible. So one bright October morning I ventured out with team and wagon, with a new triple box and a hand-scythe. I gathered catnip enough in one day to thrash out 40 pounds of choice seed.

March 31, 1902, those 40 pounds of catnip seed were scattered over ten acres of good ground, where a good crop of corn had been raised the previous year. The corn-stalks were still standing tall and thick, so I cut them down with a disk harrow to level the top surface, leaning the teeth well back so as to scatter the stalks as much as possible, forming a mulch for this much-treasured seed.

Abundance of rain soon brought forth a nice crop of catnip plants, but as soon as we had a dry spell, of say two weeks, those catnip plants withered away like the morning dew before the hot sun. One-half acre of the above-mentioned lot produced a crop of potatoes last year. The ground was rich and clean. Here the catnip did not come up until the ground was shaded by growing weeds. When the weeds were from 6 to 8 inches high

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the catnip presented a most admirable, luxuriant growth. Yes, here among the weeds a fortune was smiling in my face!

About June 10, I cut the weeds with a mower, leaving them lay where they dropped to mulch the ground; but in less than 8 days nearly every catnip plant had withered away, and withered away to stay dead for good, as the whole 10 acres has only a few isolated plants here and there.

In the latter part of October, 1902, I sowed a strip of land 2 rods wide by 10 rods long, with some of the same catnip seed. This ground had no protection, but had a good, uniform stand that measured more than 2 feet high July 1, 1903, when it began to blossom, and has blossomed continuously until quite recently. Bees will not only work on it from early morn until dark, but they will work on it immediately after a heavy, continued rain, while the water is yet dripping from the blossoms. It is perhaps the greatest nectar-yielding plant in this State.

Such is the story, in short, of perhaps the most extravagant experiment of its kind up to the present time; and while it was a failure, and the hope of ambition not realized, lessons of value may be deducted as follows:

First, that catnip will grow in the open.

Second, that the ground must be rich.

Third, that it must be sowed in the fall.

Fourth, $2\frac{1}{4}$ pounds of seed per acre is a great plenty.

I will conclude by saying that I did not gather any catnip seed this fall. Would you like to know why?

J. W. JOHNSON.
Stephenson Co., Ill., Nov. 9.

Queens Laying in Queen-Cells.

On page 663, there is an article on queen-rearing, etc., by A. C. F. Bartz. I wish to question his assertion in the closing paragraph, in which he says:

"But I believe if one would go to the trouble and take away the brood-combs from a colony intending to swarm, and insert several, say three or four combs with queen-cell cups, the queen would lay in them in such rapid succession that nearly all of them would hatch at the same time."

I wish to say to Mr. Bartz, or any one who intends trying this plan, I very much doubt his getting a single queen-cell started for some time; not until the queen has filled all the vacant cells in the combs, and then the queen will not lay in the cell-cups.

It is not an uncommon thing to see a queen lay in worker and drone cells, but I do not hesitate to say that a queen will not lay in a queen-cell. If Mr. Bartz, or any other person, ever saw one do so, let him hold up his hand.

I think if Dr. Miller was asked if a queen would lay in a queen-cell, he would say, "I don't know;" and he is one of our closest observers of the bee's habits.

I know that worker-bees can, and do, move eggs from one comb to another, and I believe they always put the eggs in the queen-cells.

DELOS WOOD.

Santa Barbara Co., Calif., Nov. 5.

Bee-Keeping in Alabama.

I moved to this State last spring, with the intention of turning my attention to fruit-growing, but the dryness of the summer and fall was much against young trees and plants, owing to its being a mountainous country with sandy soil. On finding much of the land poor and greatly impoverished by raising cotton, and washing, I said, "Clover is what this land needs;" but with one accord they urged me not to waste any time and money by sowing it, as it was too dry. This did not convince me, so I ordered red, crimson, sweet, alsike and white clovers, and sowed a little of each last spring, and, true enough, what came up mostly died before the fall rains came. That was the last of October, but I found a few roots of white and a few of red, in a place where a horse had been fed (they tell me on imported hay), that lived and did well, and made seed. I concluded that spring was not the time to sow it, so I am sowing it now.

Last spring I found a colony of bees that were queenless, so I sent for an Italian queen;



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she did her part well, but the fall was dry, and so far as I could see nothing to make honey of. My sweet clover never came up, and the only thing in the clover line is what is called here "Japan clover," and I am very doubtful if it is a clover at all; at any rate, it yields no nectar. In September I found the bees would starve if I did not feed, so I fed sugar out of jelly-glass feeders, with perforated tops, which is the handiest feeder I have ever tried. Fill the glass full, then invert, and the bees will get every drop, and not a dead bee. It is so easy to handle, too. E. B. ELLIS.

Cullman Co., Ala., Nov. 11.

Building Outside the Hive—Separators—Growing Alsike.

The Editor asks for "experiences" of bee-keepers. As I had experiences the past season, differing in some respects from any I have had before in more than 20 years of bee-keeping, I will try to relate some of them, though whether other bee-keepers will be benefited thereby is a question. My wish is that I may gain some knowledge, if some one will tell where I made mistakes, if mistakes were made by myself, or was it the bees?

In the first place, my colonies were nearly all very strong, probably caused by good feeding in the spring, before the honey-flow began. In nearly every case the space between the brood-frames and the bottom super was filled with honey before the super was half full or ready to have another put under it, and bur-combs and honey were crowded into every space available—under the honey-boards, and

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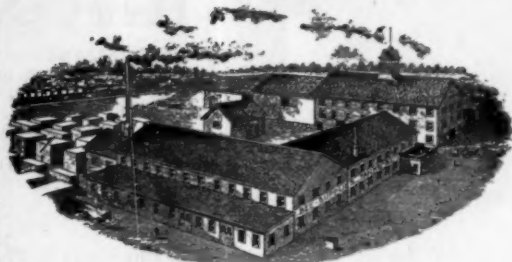
As this is the time of year when most subscribers renew their subscriptions, we wish to call special attention to the following, which we are sure will commend themselves to all:

- | | | |
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in the covers if there was a hole big enough for the bees to get past the honey-board. They even built comb outside under the porch on a number of hives, and all the time I thought I was giving them plenty of super-room. Wonder if I did.

Another thing bothered me a good deal: For the first time in my experience I used separators between the sections, the "plain, sawed" separators, and to make them as nearly like the "fences" as I could, I punched 4 holes in each piece, opposite the middle of the section with a 16-gauge wad-cutter, for a passage-way. Now as to the results:

I found about 5 percent of the sections fastened to the separators more or less firmly, and in several cases the combs were joined together right through the holes in the separators. Of course this made quite a muss when cut loose, and I had to sell these damaged sections at quite a sacrifice in price. The balance were in fine shape, and averaged about 14 ounces to the section; but this was no advantage to me, as I always sell by the pound. Now I am wondering if it pays to use separators, any way, and if I made a mistake in punching the holes in them.

When I came to remove the sections from the supers I was not a little surprised to find the bees had gnawed a large part of the separators, both and top bottom, some of them a good half inch in depth the whole four inches inside the section. I was never bitten by the front end of a bee, but don't tell me a bee has no teeth when they can gnaw a bass-wood board like that. It appeared as though the busy little bodies tried to remove those objectionable obstructions entirely out of their way.

I want to digress a little here and take up more space. In "Forty Years Among the Bees," Dr. Miller complains of poor success with alsike clover. Allow me to suggest that he try sowing it without a nurse-crop. Select the lowest ground he has—the richer it is the better—plow and prepare a good seed-bed in the fall, then in the spring (late March or early in April) scatter the seed on a good coating of snow, if possible, when it will require no other cultivation to make it germinate. In the absence of snow, cultivate very lightly after sowing the seed. In the summer, if the weeds get too high, mow with the sickle-bar raised above the clover-plants, though if some are cut off it will do no harm. If the season should prove a very dry one, I would leave the weeds for a shade to the young clover, and protection in the winter. In the 12 years continuous experience with alsike clover, I have never known it to fail in producing nectar, while some years it has been our only source of a honey crop.

A. F. FOOTE.

Mitchell Co., Iowa, Nov. 13.



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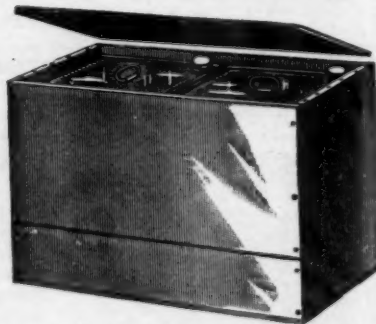
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